

## **Behavioral and Social Research Program**

### **Research Project Grants**

Award Mechanisms for Research Project Grants includes the following:

- P01 – Research Program Project
- R01 – Research Project (Traditional)
- R03 – Small Research Grant
- R15 – Academic Research Enhancement Award (AREA)
- R21 – Planning Grant
- R37 – Method to Extend Research in Time (MERIT) Award
- R55 – Shannon Award
- U01 – Cooperative Agreement Research Project Award

**BUT THIS FILE ONLY CONTAINS P01s**

**Grant:** 5P01AG018314-03  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** ALTER, GEORGE C. BA  
**Title:** Early-life conditions, Social Mobility and Longevity  
**Institution:** INDIANA UNIVERSITY BLOOMINGTON BLOOMINGTON, IN  
**Project Period:** 2001/07/01-2004/06/30

**DESCRIPTION** (applicant's abstract): The population of the developed world is rapidly aging, and recent decreases in old-age mortality imply this process will continue, with enormous implications for public spending on health care, pensions etc. The aim of the proposed project is to improve understanding of determinants of individual health and mortality in old age and the demographic, epidemiological and socioeconomic factors governing the ageing process. More specifically, the project will assess the relative importance of early-life conditions, life course transitions, prevailing living conditions and public health interventions for later-life health and mortality. This knowledge is essential for improving forecasts of the future size and health of the elderly population in anticipation of future expenditures on pensions and medical care, and for designing public health interventions to promote health and reduce mortality at older ages. Studying the impact of early-life conditions on mortality in old age requires individual life histories covering long periods of time. This project brings together appropriate longitudinal data for four European countries in a comparative analysis of these issues.

**Grant:** 5P01AG018911-03  
**Program Director:** ELIAS, JEFFREY W.  
**Principal Investigator:** CACIOPPO, JOHN T PHD  
**Title:** Social Isolation, Loneliness, Health & the Aging Process  
**Institution:** UNIVERSITY OF CHICAGO CHICAGO, IL  
**Project Period:** 2001/09/30-2006/08/31

DESCRIPTION (from the application): The purpose of the proposed Program Project Grant is to bring together sociological, psychological, and biological levels of analyses to bear on the relationships among and mechanisms underlying social isolation, feelings of loneliness, health, and the aging process. Social relationships are fundamental to emotional fulfillment, behavioral adjustment, and cognitive function. Recent research has shown that emotional closeness in relationships increases with age. Yet the number of social relationships decreases and social events triggering loneliness continue in the older adult. Moreover, they are physically aging and tend to be less resilient so these psychosocial challenges could potentially leave them vulnerable to feelings of loneliness, dysphoria, elevated and prolonged neuroendocrine stress responses, and ill health. Loneliness predicts morbidity and mortality from broad based causes in later life even after controlling for health behaviors and biological risk factors. Understanding the antecedents of feelings of loneliness and their consequences for mental and physical health can thus be studied effectively in older adults and is particularly important because life expectancy has increased in the U.S., increasing dramatically the number of older adults. Project 1 uses a longitudinal design in older adults to examine the temporal stability of loneliness, the predictors of the experience of loneliness, and the physiological (e.g., autonomic) and behavioral (e.g., health behaviors, sleep) effects associated with loneliness. Project 2 uses national survey data and linked Medicare claims data to examine the origins and consequences of loneliness and stress in the social environment. Project 3 is an animal model of vulnerability to social isolation and disruption as an individual trait, identifying the specific hormonal and immunological sequelae that increase risk for infectious and malignant disease during aging. There are also two cores that provide broad support to the projects: Core A the administrative Core, and Core B the data management and statistical management core.

**Grant:** 3P01AG018911-03S1  
**Program Director:** ELIAS, JEFFREY W.  
**Principal Investigator:** CACIOPPO, JOHN T. PHD  
**Title:** Social Isolation, Loneliness, Health & the Aging Process  
**Institution:** UNIVERSITY OF CHICAGO CHICAGO, IL  
**Project Period:** 2001/09/30-2006/08/31

Abstract Text Not Available

**Grant:** 1P01AG022500-01  
**Program Director:** SHRESTHA, LAURA B.  
**Principal Investigator:** CAREY, JAMES R PHD  
**Title:** The biodemography of life span  
**Institution:** UNIVERSITY OF CALIFORNIA DAVIS DAVIS, CA  
**Project Period:** 2003/09/15-2008/06/30

DESCRIPTION (provided by applicant): This program will bring experimental techniques, biological systems, demographic concepts, statistical methods, and theoretical models to bear on questions concerning the determinants of life span in both humans and in non-human model systems including both vertebrates (comparative demography of mammals; birds) and invertebrates (fruit flies; nematodes; honey bees). The five research projects that form the program are organized around the following crosscutting themes: (1) Life span is adaptive and shaped by nature; (2) Individuals age in the wild; (3) Sociality and life span are mutually affecting; and (4) Superarching principles provide all embracing order to variation in animal life spans. The program will generate new large-scale demographic databases for the honey bee, wild medflies, and *C. elegans* and life history data from the literature on several dozen vertebrate species, introduce new statistical models for analysis of demographic data on model species, develop a novel methodology for studying aging in the wild, develop more fully the mathematical foundations of biodemography, generate new models and theories concerned with the role of intergenerational transfer and sociality in the evolution of life span, explore questions concerned with the effects of stochastic environments on the evolution life span and hazard rates, and use comparative demography to identify general principles concerning life span evolution.

**Grant:** 3P01AG017211-04S1  
**Program Director:** ELIAS, JEFFREY W.  
**Principal Investigator:** CZAJA, SARA J PHD  
**Title:** CENTER ON RESEARCH AND EDUCATION--AGING AND TECHNOLOGY  
**Institution:** UNIVERSITY OF MIAMI-MEDICAL Coral Gables, FL  
**Project Period:** 1999/08/01-2004/07/31

A pressing need for the upcoming decades is ensuring that the large population of Older Americans are able to function independently and maintain an acceptable quality of life. Given the increased use of computers and other forms of technology in most settings, one important area of concern is how well older people will be able to adapt to rapid developments in technology. In order to function independently, people of all ages must learn how to assimilate technology into their lives. This represents a challenge for many older people. Available data indicates that older people typically have more difficulty learning and operating technical systems than younger people. Unless we understand how age affects the use of technology, successful use of technical systems will continued to be a challenge for current and future generation of older adults. Given that technology is not static, people must continually confront the need to learn to use new systems. The objective of the proposed multi-component program is to develop a center for Research and Education on Aging and Technology Enhancement (CREATE). The focus of the Center will be on conducting research aimed at understanding how age-related changes in function on an older's ability to interact successfully with technical systems. An additional goal of the Center is to ensure that these outcomes are disseminated to designers of technical systems and implemented in a wide variety of settings. Given that the emphasis in technologically-based tasks is on cognitive demands, all of the proposed research projects will investigate how age-related changes in cognitive abilities impact on task performance. Thus the Center will also generate data on large, representative samples of older adults which can be used by the research and design communities and further our understanding of issue relevant to aging and cognition. The Center will consist of a consortium of three universities: the University of Miami, Florida State University, and Georgia Institute of Technology. The research program of the Center will involve research projects that focus on different but complementary aspects of human-technology interaction (input device, design, training and interface design). The projects will investigate these issues over a broad range of tasks. The theoretical approach for the research projects is based on a combination of human factors engineering and cognitive psychology perspectives. The outcomes of each of the projects will include design guidelines for a broad range of technologies as well as information regarding aging and cognition. In addition, the projects will generate an extensive database on a large battery of component abilities. The Center will include a student research program to stimulate interest in aging, human factors, and cognition among future scientists. The Center will also include a management core and data management/statistical core. The cores will provide technical and administrative support, and scientific oversight to the research projects. The proposed Center is unique in terms of its emphasis on factors, aging, technology, a multi-disciplinary research team, a comprehensive approach to issues regarding aging and technology, and study populations which include diverse samples of older adults.

**Grant:** 5P01AG017211-05  
**Program Director:** ELIAS, JEFFREY W.  
**Principal Investigator:** CZAJA, SARA J PHD  
**Title:** CENTER ON RESEARCH AND EDUCATION--AGING AND TECHNOLOGY  
**Institution:** UNIVERSITY OF MIAMI-MEDICAL Coral Gables, FL  
**Project Period:** 1999/08/01-2004/07/31

A pressing need for the upcoming decades is ensuring that the large population of Older Americans are able to function independently and maintain an acceptable quality of life. Given the increased use of computers and other forms of technology in most settings, one important area of concern is how well older people will be able to adapt to rapid developments in technology. In order to function independently, people of all ages must learn how to assimilate technology into their lives. This represents a challenge for many older people. Available data indicates that older people typically have more difficulty learning and operating technical systems than younger people. Unless we understand how age affects the use of technology, successful use of technical systems will continued to be a challenge for current and future generation of older adults. Given that technology is not static, people must continually confront the need to learn to use new systems. The objective of the proposed multi-component program is to develop a center for Research and Education on Aging and Technology Enhancement (CREATE). The focus of the Center will be on conducting research aimed at understanding how age-related changes in function on an older's ability to interact successfully with technical systems. An additional goal of the Center is to ensure that these outcomes are disseminated to designers of technical systems and implemented in a wide variety of settings. Given that the emphasis in technologically-based tasks is on cognitive demands, all of the proposed research projects will investigate how age-related changes in cognitive abilities impact on task performance. Thus the Center will also generate data on large, representative samples of older adults which can be used by the research and design communities and further our understanding of issue relevant to aging and cognition. The Center will consist of a consortium of three universities: the University of Miami, Florida State University, and Georgia Institute of Technology. The research program of the Center will involve research projects that focus on different but complementary aspects of human-technology interaction (input device, design, training and interface design). The projects will investigate these issues over a broad range of tasks. The theoretical approach for the research projects is based on a combination of human factors engineering and cognitive psychology perspectives. The outcomes of each of the projects will include design guidelines for a broad range of technologies as well as information regarding aging and cognition. In addition, the projects will generate an extensive database on a large battery of component abilities. The Center will include a student research program to stimulate interest in aging, human factors, and cognition among future scientists. The Center will also include a management core and data management/statistical core. The cores will provide technical and administrative support, and scientific oversight to the research projects. The proposed Center is unique in terms of its emphasis on factors, aging, technology, a multi-disciplinary research team, a comprehensive approach to issues regarding aging and technology, and study populations which include diverse samples of older adults.

**Grant:** 5P01AG010120-11  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** FOGEL, ROBERT W PHD  
**Title:** Early Indicators of Later Work Levels, Disease and Death  
**Institution:** NATIONAL BUREAU OF ECONOMIC RESEARCH CAMBRIDGE, MA  
**Project Period:** 1992/03/05-2006/08/31

DESCRIPTION (provided by applicant): The completed life-cycle Union Army data set is based on 35,570 men out of a randomly drawn sample of 39,616 males who were mustered into the Union Army during 1861-1865. Socioeconomic and biomedical histories of the recruits from childhood to death have been created by linking together information from different sources. The specific aims of this program project are: 1) to investigate the impact of socioeconomic and biomedical insults during developmental, middle-life, and older ages on the onset of specific chronic diseases at middle and late ages, on the capacity to work during these ages, on the demand for retirement, and on waiting time to death from specific causes; 2) to chart the way in which these life-cycle interactions have changed with successive cohorts that reached age 65 during the twentieth century; 3) to chart the way in which these life-cycle interactions have changed for different races and different socioeconomic groups; 4) to study the impact of familial factors (environmental and genetic elements taken together) on mortality, health in later life, and exceptional longevity; 5) to estimate what types of public health interventions have been most effective in lowering mortality rates and improving health; 6) to expand the range of biomedical and socioeconomic factors that can be considered in the life-cycle Union Army data set by linking it to the 1880 census, which provides health information, and by linking it to data on the epidemiological characteristics of cities and of wards in the late 1800s and early 1900s and 7) to create three new life-cycle samples, one for black Union Army veterans, one for men rejected for service from the Union Army, and one for Union Army veterans found in a large, previously, collected data set gathered from published U.S. family histories. The first two data sets will permit us to examine populations not represented in the life-cycle Union Army data set, the second sample will permit us to consider more fully racial differences in the aging process, and the third sample will allow us to control for familial characteristics.



**Grant:** 3P01AG010120-11S1  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** FOGEL, ROBERT W PHD  
**Title:** Early Indicators of Later Work Levels, Disease and Death  
**Institution:** NATIONAL BUREAU OF ECONOMIC RESEARCH CAMBRIDGE, MA  
**Project Period:** 1997/09/30-2006/08/31

DESCRIPTION (provided by applicant): The aims of this program project, as funded, are to: 1. investigate the impact of socioeconomic and biomedical insults during developmental, middle-life, and older ages on the onset of specific chronic diseases at middle and late ages, and on waiting time to death from specific causes in both white and black populations; 2. examine the effect of pensions and health on the demand for retirement and for independent living arrangements among black Union Army (UA) veterans; 3. Estimate what types of public health interventions have been most effective in lowering mortality, improving health in later life, and promoting exceptional longevity; 4. expand the range of biomedical and socioeconomic factors that can be considered in the life-cycle Union Army data set by linking it to the 1880 census, which provides health information, and by linking it to data on the epidemiological characteristics of cities and wards; 5. Create two new life-cycle samples, one for black UA veterans and one for men rejected for service from the UA; and 6. Maintain and improve the life-cycle sample of white UA veterans and encourage wider use through a sub-grants program. The supplement will enhance the program project by expanding the life-cycle data set of white UA veterans by creating a sample of brothers, allowing incorporation of a much richer set of covariates into the analysis. It will help us better understand what determines pension outcomes and provide valuable input for our analysis of the effects of pensions on black and white retirement rates and living arrangements. It will enhance the analysis of the predictors of later morbidity and mortality carried out under the parent grant by focusing on a specific devastating and relatively common affliction--lead poisoning. Specifically, the aims of this supplemental application are to: 1. investigate the impact of observable familial factors on health and mortality across the life cycle and to estimate the social and environmental determinants of morbidity and longevity controlling for unobserved heterogeneity at the family level; 2. examine the social construction of disability in the past and the role of politics in past disability programs; 3. document the proportion of the population, by subgroups, with elevated lead levels and examine the effects of lead exposure on health, morbidity, mortality, and labor force participation; and 4. speed up the collection of the life-cycle sample of black Union Army veterans, expand the current public database to cover the beginning of the twentieth century, and create a life-cycle sample of brothers who served in the Union Army. Finally, we propose to expand the Administrative Core D commensurately to support the new scientific projects and the expanded Data Extension Core B.

**Grant:** 5P01AG021079-02  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** HAUSER, ROBERT M  
**Title:** Wisconsin Longitudinal Study: Tracking the Life Course  
**Institution:** UNIVERSITY OF WISCONSIN MADISON MADISON, WI  
**Project Period:** 2002/09/15-2007/06/30

DESCRIPTION (provided by applicant): We propose a collaborative, multidisciplinary program of projects on aging and the life course that will both exploit and add to core resources of the Wisconsin Longitudinal Study (WLS). The program will use existing longitudinal data and new data, collected 45 years after the 1957 high school graduation of the original 10,317 participants. We are more than 50 investigators and colleagues at the University of Wisconsin and across the nation. We want to exploit the unique scientific value of the WLS, along with other relevant and comparable data on population aging, to pursue a broad agenda of research on social and economic factors in health and aging. We represent diverse scientific fields - sociology, demography, epidemiology, economics, social and cognitive psychology, industrial engineering, neuroscience, social work, psychiatry, nursing, and medicine. Our analytic work will reflect and, we hope, intermingle the full range of theories, models, and methods of our home disciplines. Regardless of individual and collective plans, all WLS data will be released to the research community as soon as they can be collected, cleaned, and documented. We will recruit, encourage, and support a cadre of researchers (and researchers-in-training) at the UW-Madison and elsewhere who will fully exploit the unique resources of the Wisconsin Longitudinal Study. We will supplement existing and new WLS data with linked data from individual administrative records, organizational records, and small area data. We will disseminate WLS data by several means including both public and secure access. We will sponsor and organize local and extramural seminars and workshops to encourage use of WLS data and to report research in progress, and we will organize a small project competition and workshops to encourage innovative uses (and new users) of WLS data. We will provide common resources and avenue for productive scientific interaction for an initial set of seven major analytic research projects that will use data from the WLS: Social and Behavioral Contexts of the Aging Mind; End-of-Life Planning and Well-Being in Late Life; Non-normative Parenting Impacts in Midlife and Old Age; Access to Care and Health Outcomes in the Near Elderly; Work, Health, and Well Being; Education in Careers, Health, and Retirement; and The Emotional Brain Across the Life Course.

**Grant:** 5P01AG017937-04  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** MANTON, KENNETH G MA  
**Title:** POPULATION MODELS OF FACTORS AFFECTING HEALTH TRENDS  
**Institution:** DUKE UNIVERSITY DURHAM, NC  
**Project Period:** 2000/04/01-2005/03/31

This Program Project is designed to examine the recent changes in chronic disability and functioning in the U.S. elderly populations, possible sources of those changes including the introduction of the Medicare program and, more recent, biomedical research and therapeutic innovations and the future Medicare service use and cost implications of those changes and the processes underlying them. The work builds upon a significant body of research done at CDS on the analysis and forecasting of chronic disability and health changes in the U.S. elderly population. However, that model needs to be significantly expanded in scope of adding input from economists detailed analyses of Medicare expenditures, and a more in depth analysis of specific components of health changes (e.g., dementia, stroke). To perform these analysis we have assembled a multi-disciplinary team to carry out a well integrated set of analyses. To conduct those analyses one first defines three core functions. The first (A) is longitudinally linked files but also continuous linked Medicare records which will be kept current as the project is underway (i.e., we should have Medicare data from 1999 in hand with data for 2000 shortly available thereafter; later data will be available to 2001). The third core (C) will make general health forecasts. The four projects involve (1) methodological expansion of the health model to include data from multiple sources; (2) analysis of cohort different in health and Medicare service use; (3) analyses of the natural history of Medicare expenditures; (4) analyses of the recent changes in dementia and stroke and their health cost implications These projects are all designed to take advantage of the three cores and to be integrated so that their results will help resolve the basic questions.

**Grant:** 3P01AG017625-03S3  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** MURRAY, CHRISTOPHER J.L. MD  
**Title:** THE GLOBAL BURDEN OF DISEASE 2000 IN AGING POPULATIONS  
**Institution:** HARVARD UNIVERSITY (SCH OF PUBLIC HLTH) BOSTON, MA  
**Project Period:** 2000/09/30-2005/08/31

The proposed program project on The Global Burden of Disease 2000 in Aging Populations is a coherent series of investigations that will strengthen the methodological and empirical basis for undertaking comparative assessments of health problems, their determinants and consequences in aging populations. Since the publication of the Global Burden of Disease Study 1990, there has been increasing interest in comparative analyses of health outcomes, determinants and consequences. The World Health Organization is committed to undertaking a major revision of the Global Burden of Disease Study for the year 2000. This program project would strengthen the scientific basis for this large-scale undertaking. It is structured around a core with an administrative, a data management and a methods component and eight projects: 1) measurement of adult mortality in the developing world; 2) non-communicable disease mortality transitions; 3) adapting statistical methods for public health research; 4) avoidable causes of adult chronic disease death; 5) self-reported and observed measures of health status; 6) the impact of co-morbidity on non-fatal health outcomes; 7) summary measures of population health; and 8) health costs of aging, present and future trends. The core and the eight projects enrich each other through multiple mechanisms, including investigators working on a number of components, common datasets and methods development. A key strength of the program is the close partnership between the lead institution and the World Health Organization, assuring the close coordination of the research work in the program through key personnel. The principal investigator is both a Professor at Harvard and the acting Director of the Global Programme on Evidence for Health Policy at the World Health Organization. WHO personnel are project leaders on three components. An important goal of this project is to aging population, while at the same time strengthening the empirical and methodological foundations on which policy decisions are made.

**Grant:** 5P01AG017625-04  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** MURRAY, CHRISTOPHER J.L. MD  
**Title:** THE GLOBAL BURDEN OF DISEASE 2000 IN AGING POPULATIONS  
**Institution:** HARVARD UNIVERSITY (SCH OF PUBLIC HLTH) BOSTON, MA  
**Project Period:** 2000/09/30-2005/08/31

The proposed program project on The Global Burden of Disease 2000 in Aging Populations is a coherent series of investigations that will strengthen the methodological and empirical basis for undertaking comparative assessments of health problems, their determinants and consequences in aging populations. Since the publication of the Global Burden of Disease Study 1990, there has been increasing interest in comparative analyses of health outcomes, determinants and consequences. The World Health Organization is committed to undertaking a major revision of the Global Burden of Disease Study for the year 2000. This program project would strengthen the scientific basis for this large-scale undertaking. It is structured around a core with an administrative, a data management and a methods component and eight projects: 1) measurement of adult mortality in the developing world; 2) non-communicable disease mortality transitions; 3) adapting statistical methods for public health research; 4) avoidable causes of adult chronic disease death; 5) self-reported and observed measures of health status; 6) the impact of co-morbidity on non-fatal health outcomes; 7) summary measures of population health; and 8) health costs of aging, present and future trends. The core and the eight projects enrich each other through multiple mechanisms, including investigators working on a number of components, common datasets and methods development. A key strength of the program is the close partnership between the lead institution and the World Health Organization, assuring the close coordination of the research work in the program through key personnel. The principal investigator is both a Professor at Harvard and the acting Director of the Global Programme on Evidence for Health Policy at the World Health Organization. WHO personnel are project leaders on three components. An important goal of this project is to aging population, while at the same time strengthening the empirical and methodological foundations on which policy decisions are made.

**Grant:** 5P01AG020166-02  
**Program Director:** ELIAS, JEFFREY W.  
**Principal Investigator:** RYFF, CAROL D PHD  
**Title:** Integrative Pathways to Health and Illness  
**Institution:** UNIVERSITY OF WISCONSIN MADISON MADISON, WI  
**Project Period:** 2002/09/30-2008/07/31

DESCRIPTION (provided by applicant): The purpose of this program project grant is to carry forward MIDUS, a national survey (N= 7,189), conducted in 1994/95 by the MacArthur Midlife Research Network. The sample included adults aged 25 to 74, as well as twins and siblings. Conceived by a multidisciplinary team, the study investigated the role of behavioral, psychological, and social factors in accounting for age-related variations in health and illness. MIDUS II will add a second wave to the study, approximately 9-10 years later. In addition, it will include a sample of African Americans in Milwaukee, WI (N= 400). Project 1 data collection will include a repeat assessment of the original MIDUS telephone interview and self-administered questionnaire. These instruments will be augmented to include new assessments of cognitive functioning, optimism and coping, stressful events, and caregiving. Built around the Project 1 data collection are five projects, each adding significant strengths to the overall agenda. Project 2 will use diary techniques to assess daily stressors in a subsample of MIDUS respondents (including twins) and their effects on health and well being. Project 3 will focus on cognitive functioning and its connection to other psychological factors, as well as health outcomes and will include in-depth laboratory analyses with a Boston over-sample. Project 4 will collect biological data on a subsample of MIDUS respondents located in three geographic regions, with a focus on multiple indicators of physiological wear and tear that will be linked with multi-domain psychosocial experience. The biological data collection will include laboratory challenge studies (both cognitive and orthostatic), with accompanying assessments of salivary cortisol, blood pressure and heart-rate variability. Project 5 will focus on the central circuitry of emotion (affective neuroscience) and will include EEG measures of cerebral activation asymmetry and emotion-modulated startle. These measures have been previously linked to dispositional affect, depression, recovery from stressful events, and selected biomarkers. MIDUS affords the opportunity to investigate such relationships in a sociodemographically diverse sample with wide age ranges and comprehensive biomarkers. Five scientific cores surround these projects (Coordination, Psychosocial Measures, Biological Measures, Statistics, and Pilot Studies). Collectively, the scientific agenda represents a multi-level, multidisciplinary approach to understanding life course pathways to health and illness. The team of investigators has an outstanding record of past success working together to advance the frontiers of integrative science. All projects and cores include detailed responses to feedback received in the prior round of reviews.

**Grant:** 3P01AG020166-02S1  
**Program Director:** ELIAS, JEFFREY W.  
**Principal Investigator:** RYFF, CAROL D. PHD  
**Title:** Integrative Pathways to Health and Illness  
**Institution:** UNIVERSITY OF WISCONSIN MADISON MADISON, WI  
**Project Period:** 2002/09/30-2008/07/31

DESCRIPTION (provided by applicant): The purpose of this program project grant is to carry forward MIDUS, a national survey (N= 7,189), conducted in 1994/95 by the MacArthur Midlife Research Network. The sample included adults aged 25 to 74, as well as twins and siblings. Conceived by a multidisciplinary team, the study investigated the role of behavioral, psychological, and social factors in accounting for age-related variations in health and illness. MIDUS II will add a second wave to the study, approximately 9-10 years later. In addition, it will include a sample of African Americans in Milwaukee, WI (N= 400). Project 1 data collection will include a repeat assessment of the original MIDUS telephone interview and self-administered questionnaire. These instruments will be augmented to include new assessments of cognitive functioning, optimism and coping, stressful events, and caregiving. Built around the Project 1 data collection are five projects, each adding significant strengths to the overall agenda. Project 2 will use diary techniques to assess daily stressors in a subsample of MIDUS respondents (including twins) and their effects on health and well being. Project 3 will focus on cognitive functioning and its connection to other psychological factors, as well as health outcomes and will include in-depth laboratory analyses with a Boston over-sample. Project 4 will collect biological data on a subsample of MIDUS respondents located in three geographic regions, with a focus on multiple indicators of physiological wear and tear that will be linked with multi-domain psychosocial experience. The biological data collection will include laboratory challenge studies (both cognitive and orthostatic), with accompanying assessments of salivary cortisol, blood pressure and heart-rate variability. Project 5 will focus on the central circuitry of emotion (affective neuroscience) and will include EEG measures of cerebral activation asymmetry and emotion-modulated startle. These measures have been previously linked to dispositional affect, depression, recovery from stressful events, and selected biomarkers. MIDUS affords the opportunity to investigate such relationships in a sociodemographically diverse sample with wide age ranges and comprehensive biomarkers. Five scientific cores surround these projects (Coordination, Psychosocial Measures, Biological Measures, Statistics, and Pilot Studies). Collectively, the scientific agenda represents a multi-level, multidisciplinary approach to understanding life course pathways to health and illness. The team of investigators has an outstanding record of past success working together to advance the frontiers of integrative science. All projects and cores include detailed responses to feedback received in the prior round of reviews.

**Grant:** 3P01AG020166-02S2  
**Program Director:** ELIAS, JEFFREY W.  
**Principal Investigator:** RYFF, CAROL D. PHD  
**Title:** Integrative Pathways to Health and Illness  
**Institution:** UNIVERSITY OF WISCONSIN MADISON MADISON, WI  
**Project Period:** 2002/09/30-2008/07/31

Abstract Text Not Available



**Grant:** 5P01AG019783-03  
**Program Director:** STAHL, SIDNEY M.  
**Principal Investigator:** SKINNER, JONATHAN S PHD  
**Title:** Causes and Consequences of Health Care Intensity  
**Institution:** DARTMOUTH COLLEGE HANOVER, NH  
**Project Period:** 2001/09/15-2006/08/31

DESCRIPTION (provided by applicant): In 1996, average Medicare per capita expenditures were \$3,700 in Minneapolis and \$7,783 in Miami. Differences of a similar magnitude were observed across regions in patterns of end-of-life care, such as the chances of dying in a hospital or the number of different specialists seen in the last 6 months of life. Previous research indicates that these geographic variations in treatment are due largely to differences in intensity, i.e., differences in the way similar patients are treated. Improved understanding of the causes and consequences of regional variations in intensity could have important implications for the health and well-being of the elderly, for addressing health disparities and for the financial health of the Medicare trust funds. This project addresses these issues by: 1. Measuring how patients of similar illness levels are treated differently across regions with respect to both overall intensity and different dimensions of intensity. 2. Determining the causes of differences in intensity. To what extent are they due to patient preferences for care, physician beliefs, or other factors? Why is it the norm in some regions but not others for elderly patients to experience extensive diagnostic testing for CAD, with subsequent downstream procedures, specialist referrals, and hospitalization? 3. Studying the consequences of greater health care intensity. What is the impact of greater intensity of care on outcomes that include survival, health functioning, and well-being more generally? 4. Seeking to understand how health care intensity, either across regions or over time, affects disparities across socioeconomic groups in health care treatments and outcomes. The project will bring together a cross-disciplinary research team comprised of investigators from the DAWG; the PORT; the Maine Medical Center; the Center for Survey Research in Boston, MA; Massachusetts General Hospital; and the National Bureau of Economic Research.

**Grant:** 3P01AG019783-03S1  
**Program Director:** STAHL, SIDNEY M.  
**Principal Investigator:** SKINNER, JONATHAN S PHD  
**Title:** Causes and Consequences of Health Care Intensity  
**Institution:** DARTMOUTH COLLEGE HANOVER, NH  
**Project Period:** 2001/09/15-2006/08/31

DESCRIPTION (provided by applicant): Prior research has documented marked regional variations in medical practice and per-capita Medicare spending that cannot be attributed to regional differences in illness. Although many explanations have been proposed, often focusing on the behavior of providers, the role of patient preferences in regional variations is not well understood. Moreover, few studies have explored the formation of these patient preferences. Working with Medicare enrollees, the proposal aims to: 1. Test whether preferences for care differ systematically across regions. 2. Determine how individual and regional variations in preferences for specific approaches to health care are associated with differences in patients' fundamental health goals, beliefs about efficacy, social pressures, and barriers to care. 3. Describe enrollees' perceptions of their unmet needs and quality of care, and determine whether these perceptions are related to regional differences in health care intensity. 4. Determine whether the intensity of care actually received can be explained by individual preferences for specific kinds of care as opposed to regional practice patterns and other factors. 5. Determine how differences in race are related to preferences, the factors underlying these preferences (i.e., goals, beliefs, social pressures, and barriers), and experiences with unmet needs and quality of care. We propose a national telephone survey of Medicare enrollees (n = 3200) and follow-up in-person interviews (n = 400) to address these aims. This represents an innovative synthesis of well-developed telephone survey strategies and personal preference elicitation techniques. The results will help clarify causes of regional variations in health care, provide a better understanding of racial and ethnic disparities in health care, and shed light on market-based approaches to health care reform.

**Grant:** 1P01AG023028-01  
**Program Director:** CHON-LEE, ANGIE J  
**Principal Investigator:** SUSSER, EZRA S DPH  
**Title:** Early Determinants of Adult Health  
**Institution:** COLUMBIA UNIVERSITY HEALTH SCIENCES NEW YORK, NY  
**Project Period:** 2003/09/30-2008/08/31

DESCRIPTION (revised): Tantalizing findings have emerged from epidemiologic studies to suggest that the prenatal period may influence disease risk in adult life. Birthweight has received particular attention; low birthweight may increase the risk of cardiovascular and neuropsychiatric diseases, high birthweight may increase risk of breast cancer. While intriguing, the existing literature on birthweight and adult health outcomes has not adequately addressed (1) potential confounding by family factors; (2) the importance of other measures of fetal growth; (3) potential biologic mechanisms; (4) the independent effect of maternal characteristics and exposures; (5) the contribution of postnatal growth; and (6) potential mediation by adult risk factors.

The Early Determinants of Adult Health (EDAH) Project will address these issues using an integrative approach to investigate early determinants of adult health in three research projects: a cardiovascular risk (CVD) Project, a breast cancer risk (BC) Project, and a neuropsychiatric (NP) Project. We will recruit offspring of pregnant women who were enrolled during 1959 to 1967 in two birth cohorts: a New England cohort (Boston and Providence sites of the Collaborative Perinatal Project) and a California cohort (Child Health and Development Study). The offspring are now 37-45 years old—an ideal age to start measuring intermediate markers and following for adult diseases. We will assess two complementary samples: 1. a Sibling sample which will enable us to control for family factors such as socioeconomic status, and 2. a Single Child sample of low and high birthweight which will ensure sufficient statistical power at the tail ends of the birthweight distribution. The total combined sample is 2,500 individuals (Sibling sample 2,000 and Single Child sample 500) An important feature of the study is the use of sibling controls where possible to avoid residual confounding by unmeasured family factors and socioeconomic status. The study population will include 200 same-sex sibling sets (of which at least one member is of low birth weight) for a total of 400 study subjects. Exposure information will be derived from prospectively collected pre and postnatal data on mothers, infants, and childhood growth, as well as from serologic analysis of archived maternal prenatal sera. We will combine these pre and postnatal data with the adult interview and clinical data in the three health domains.

The EDAH is a collaborative research program which cuts across birth cohorts, academic institutions, and scientific domains. The project will be conducted as partnership of research teams at Columbia and Harvard Universities, with California investigators also playing a leading role. In addition to the CVD, BC, and NP Projects, it includes four Cores: the Administrative and Scientific Leadership (ASL) Core, the Location and Assessment (LA) Core, the Biostatistics and Data Management (BDM) Core, and the Serology/Hormone (S/H) Core. Expenses for the ASL Core are partly covered under the proposal. For the other Cores, expenses are entirely contributed by the collaborating institutions. By bringing together expertise across institutions and scientific disciplines, and combining two large birth cohorts to implement a novel design, the study provides an unparalleled opportunity to answer questions about early antecedents of chronic disease.

**Grant:** 1P01AG023394-01  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** TUCKER, KATHERINE L PHD  
**Title:** Center for Research/Nutrition & Health among the Elderly  
**Institution:** TUFTS UNIVERSITY BOSTON BOSTON, MA  
**Project Period:** 2003/09/30-2008/06/30

(Revised Abstract) DESCRIPTION: Puerto Rican older adults living in the U.S. mainland have been identified as a group highly at risk of excess chronic conditions, particularly diabetes, depression, and physical impairment. Few studies have been conducted on this rapidly growing and generally low-income ethnic group. To reduce health disparities, it is necessary to understand the factors that combine to progress to poor health outcomes. The overall aim of this Center is to perform a series of inter-related studies involving a cohort of older adults of Puerto Rican origin to evaluate specific stressors affecting the Puerto Rican community, and to determine the effect of these stressors on allostatic load and, in turn, on disease-specific outcomes. The Center will include four research projects. Project 1 is a prospective 2-year cohort study that will investigate both baseline and 2-year prospective associations between psychosocial stressors and allostatic load; and in turn, allostatic load and functional decline, specifically depression, cognitive decline and physical disability; along with the role of support, and vitamin intake and status in modifying these associations. Project 2 is a sociological investigation of psychosocial stressors and their measurement using both qualitative and quantitative methodology to gain contextual understanding of the sources of stress in this population that relate to allostatic load, and adapt instruments for its measurement. Project 3 consists of intervention studies. Using subsets of the baseline study, researchers will investigate the effectiveness of three different 2-year interventions in reducing indicators of allostatic load. Each is designed to be feasible for expansion by community agencies if effective. These include: 1) vitamin supplementation; 2) food coupons and nutrition education; and 3) social support and participation. Project 4 will investigate genetic contributions of allostatic load. Investigators will explore the relationship between selected gene variants and allostatic load at baseline and with change over time, and will investigate the interaction between gene variants and responses to the differing nutrition and social interventions. Three cores will work with all projects, including administrative, statistical, and laboratory cores. A pilot grants program during years 2 through 4 will encourage additional investigations relevant to the Center theme.

**Grant:** 5P01AG008761-14  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** VAUPEL, JAMES W MOTH OTHER AREAS  
**Title:** OLDEST OLD MORTALITY--DEMOGRAPHIC MODELS AND ANALYSIS  
**Institution:** DUKE UNIVERSITY DURHAM, NC  
**Project Period:** 1990/02/01-2003/12/31

DESCRIPTION (provided by applicant): Our current understanding of late mortality patterns may be limited by the experimental conditions under which they have been studied. This project is designed to expand our understanding about the process of senescence to species in its natural environment and to a possible new model system for aging using a plant species. This study, with *Plantago lanceolata*, is the largest demographic study of a species in its natural environment. The specific aims of this application include the following: to determine whether this species, shows age-dependent mortality, either in its natural environment or under controlled conditions; to quantify the genetic contribution to mortality patterns in a natural environment; and to use longitudinal data from a large number of individuals to link the lifecourse dynamics of individuals together with the population-level mortality patterns. The preliminary results from this study suggest that in a natural environment, mortality is very high and it shows seasonal and yearly variation. The analysis to date shows that, in the natural population, the largest individuals have the greatest reproductive output and the lowest mortality. The preliminary conclusion is that this species, that shows continued growth after reproductive maturity, may be able to escape the aging processes. Considerably more demographic analysis is required to verify this hypothesis. Additional analysis is planned to evaluate the importance of cohort history to the mortality dynamics, to link the longitudinal history of individuals with the mortality patterns, to determine if there is any evidence for a physiological decline associated with aging, and to determine how family and spatial location influence the mortality dynamics. One of the interesting results from this experiment is that under controlled conditions, individuals live significantly longer than they do in natural conditions, and the mortality patterns are very plastic. Future results will show whether this species shows age-dependent mortality at extremely late ages under these controlled conditions. This application requests 1.5 years of additional funding to support the continuation of the experiments and the analysis of the results.

**Grant:** 5P01AG005842-18  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** WISE, DAVID A PHD  
**Title:** ECONOMICS OF AGING  
**Institution:** NATIONAL BUREAU OF ECONOMIC RESEARCH CAMBRIDGE, MA  
**Project Period:** 1986/01/01-2003/12/31

The United States population is growing older and persons are living longer. Yet older persons have been leaving the labor force at younger and younger ages. Moreover, most Americans have said very little. At the same time, the cost of medical care has been increasing. It is likely that the trend toward earlier retirement will be reversed and demographic forces will squeeze the young to save more. The cost of medical care may continue to increase. The same forces are at work in virtually all industrialized countries. Thus understanding the determinants of retirement, understanding the nature of saving for retirement, and understanding the nature of saving for retirement, and understanding how to more efficiently determine medical care are perhaps the most critical issues that demographic trends have forced upon us. With past trends and likely future trends providing the focus, the program project will aim to: (1) Assess the implications of expanding personnel retirement saving for the level, distribution, and risk of future retirement wealth. (2) Improve the potential of accurate measurement of wealth and other household attributes in surveys like the HRS and AHEAD, by developing experimental methods that can be used to determine the implications of alternative survey designs. (3) Determine the effect of social security provisions on retirement in twelve industrialized countries, to understand the political and economic determinants of current provisions, and to assess the implications of early retirement for political and economic determinants of current provisions, and to assess the implications of early retirement for foregone productive capacity. (4) Understand the relationship between wealth and health over the life cycle, making comparisons across and within nations, and between and within populations subgroup. (5) Understand the relationship between the medical expenditures and employees and the provisions of firm health insurance plans. (6) Understand the distribution the medical expenditures in the U.S. elderly population, how they are financed, and the health and other factors that determine expenditures and expenditure growth. (7) Assess the nature of access to health care, measured by both insurance coverage and the treatment that is available to insurance plan members. The Program Project is the foundation of a substantially larger NBER program on the economics of aging and health care and has the goals that are substantially broader than the specific research aims listed above. In general, the program aims to promote research among a broader group of economists at the NBER, nationwide, and abroad, and to foster training of young economists who will subsequently contribute to the overall research effort. In addition, the program aims to expand and maintain the data bank that supports a large amount of fundamental research.

**Grant:** 3P01AG005842-18S1  
**Program Director:** PATMIOS, GEORGEANNE  
**Principal Investigator:** WISE, DAVID A PHD SOC SC/REL  
DI:ECONOMICS, OTHER  
**Title:** ECONOMICS OF AGING  
**Institution:** NATIONAL BUREAU OF ECONOMIC RESEARCH CAMBRIDGE, MA  
**Project Period:** 1986/01/01-2003/12/31

Abstract Text Not Available